

**REMARKS**

Claims 1-3 were pending in the application. Claims 4-16 have been cancelled without prejudice or disclaimer. Claim 1 has been amended in accordance with the Examiner's comments in the Advisory Action and the discussions during a telephone interview conducted with the Examiner on June 24, 2003. New claims 17-52 have been added.

As a preliminary matter, Applicant is grateful to Examiner Eng for the courtesy and cooperation extended to Applicant and his representative during the telephone interview. The features of the invention that distinguish the present invention over the prior art, as noted subsequently, were discussed and the basis for clarifying those features in claim 1 were discussed. Applicant is grateful for the Examiner's indication that, with the amendments as presented herein, the art applied against the claims would be overcome. Applicant also appreciates that the Examiner must update his search before reaching any conclusion as to patentability. Applicant believes that for the reasons given herein, the claimed invention, based on the combination of features presently recited in the claims, clearly is patentable.

***Double Patenting***

Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent 5,751,338 (*Ludwig I*) in view of U.S. Patent 5,382,972 (*Kannes*). This rejection is traversed.

Claims 1-3 are rejected under the judicially created doctrine of obviousness-double patenting as being unpatentable over claim 1 of U.S. Patent 6,081,291 (*Ludwig II*), in view of U.S. Patent 5,382,972 (*Kannes*). This rejection is traversed.

Applicant notes the Examiner's intention to withdraw the rejections upon filing a proper Terminal Disclaimer.

***Claim Rejections - 35 U.S.C. § 112***

Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner argues that in claim 1, the term "and/or" is vague and indefinite. The Examiner rejects claims 2-3 because of their dependency on claim 1. This rejection is traversed.

The Examiner has suggested language to overcome the rejection and Applicant has amended the claim to incorporate that language.

***Claim Rejections - 35 U.S.C. § 102***

Claims 1-3 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Friedell et al* (5,491,508). This rejection is traversed.

The present invention is not anticipated by *Friedell et al* for at least the reasons given in the previous amendment. The Examiner has responded to the Applicant's argument, primarily by asserting that the Applicant's argument is not supported by express language in the claims. Applicant disagrees, but, in order to provide a clear focus on the invention and to refute the Examiner's position, Applicant will first summarize the key features of the invention. Then, the Applicant will identify clarifying claim amendments that explicitly state the capabilities of the claimed invention.

**The Claimed Combination With Public Network Connectivity is Not in Friedell et al**

- The present invention is expressly directed to a system that extends beyond a local area network and includes (1) an aggregating "multimedia central office" that links (2) the aggregate community (first premises network) with (3) another workstation not in that network. This claimed combination is not found in *Friedell et al*. Moreover, the claimed arrangement permits connectivity via another network, such as a public digital network.

The Examiner did not accept this distinction because a public digital or wide area network is not in the claim. Further, the Examiner asserts that each HUB 14 in *Friedell et al* defines a network and further asserts that each HUB 14 is a multimedia central office.

Applicant submits that this is plainly wrong. First, Applicant distinguishes between HUBs and multimedia central offices, as is clear in Fig. 2 of the present application. These are different and separately defined structures, as would be understood by one skilled in the art. Figure 3 of the present application identifies an exemplary multimedia central office, which clearly is more than a simple HUB, as in *Friedell et al*. Thus, the Examiner's assertion that a HUB defines a network is not supported by conventional definitions or by Applicant's disclosure. Second, in *Friedell et al*, there is no "multimedia central office" in communication with a network. As is clear from Fig. 1 of *Friedell et al*, HUBs connect to HUBs. Each HUB 14 connects to other HUBs 14. No HUB 14 connects to a workstation not in its "network" as defined by the Examiner. Third, the Examiner is challenged to show where there is a multimedia

central office (as in claim 1) that connects to "a first network" and "at least another workstation not associated with the network". The plain reach of the claimed system is a direct connection to a work station beyond the single local area network, or even such networks linked directly to a public digital network. Nothing like this is seen in Friedell et al.

Applicant has amended claim 1 to state that the multimedia central office is "adapted to communicate with" a public digital network, such as a local or wide area network. This describes a capability that is emphasized throughout the specification (see at least pages 6-12) and is not possible with the system of Friedell et al.

**There is No Capability To Transceive Digital Data Signals**

- Claim 1 expressly states that the central office is operative to transceive audio/video and digital data signals (which includes digital switching information) as part of the multimedia exchange. In the expressly claimed environment of a mosaic, this means that the delivery and assembly of images along with accompanying audio are accomplished by transmitting the digital switching information along with the multimedia content. *Friedell et al* does not teach such transceiving.

The Examiner does not accept this distinction and points to the use of digital data signals in a CPU, as taught at col. 6, lines 41-59 of *Friedell et al*. First, this is not digital switching information, originated at or destined for a workstation, that is transceived at the multimedia central office. The Examiner also states that the claim fails to define how to transceive audio, video, and digital data signals." The Examiner is respectfully requested to consider the remainder of the claim, which states that the transceiving is of signals "originating at or destined for at least one user workstation, to and from the premises network." The phrase clearly defines the activity of the multimedia central office with respect to such signals, particularly the data signals.

The *Friedell et al* reference cannot perform such transceiving outside its network, particularly with respect to data signals. *Friedell et al* is clearly limited to a local area network arrangement, as evident from Fig. 1, where all of the data relating to the operation of this system is carried by a separate LAN 12 that directly connects all of the workstations 10. Clearly, such system does not transceive data, particularly switching data, through any HUB 14. *Friedell's*

system must be confined to a local premises, as the LAN 12 in *Friedell* is simply a connector to all stations 10. No data goes through the HUBs 14.

In order to clarify this feature, claim 1 would be amended to state that the digital data comprises "at least switching information." No data of this sort is taught in *Friedell et al* as going through a HUB 14 and is "transceived." All such data in *Friedell et al* goes onto dedicated data line 12.

The Claimed Combination Is Not In Freidell et al

Claim 1 expressly defines an arrangement with a "multimedia central office" a "first premises network" and a separate "user workstation not associated with the first premises network." None of these are found in *Friedell et al*.

The term "central office" has a meaning in the telecommunications arts that connotes switched connectivity outside of a particular network environment. The central office in telephone systems typically connect to other systems via networks, which may be wide area or public. As disclosed and used in the claims, the multimedia central office handles audio, video and data, and connects between one network of work stations and at least one other workstation not in that network.

*Friedell* teaches only a single network within which all workstations are connected via LAN 12, rather than a network connected to a multimedia central office which is further connected to another workstation. The claim language is clear and the Examiner is improperly distorting the interpretation of terms, far beyond simply broadly interpreting terms, to frame the rejection. Without repeating the detail from the previous Amendment, Applicant has demonstrated why the *Friedell et al* HUB 14 is not a multimedia central station with the claimed connections. The Examiner cannot point to a network based on a HUB that connects to another workstation, as claimed. Each HUB 14 in *Friedell et al* connects to another HUB 14, and not to another workstation not in the network.

*Friedell et al*, with reference to col. 8, lines 10-47, does not contain such teaching. The discussion of bridge circuit 500 combining signals from three sources into a single composite video signal so that the displayed video signal has three panels, each displaying a different video signal is limited to a single premises network. This discussion does not teach that the combined captured video signals are displayed at a workstation coupled to a multimedia work station that is

not associated with the single premises network. The three inputs to the bridge 500 are at a single premises network and are displayed on terminals forming part of that network. Again, it is clear that *Friedell et al* operates in a single premises because the digital signals are carried on a LAN 12, such medium clearly being of use only locally.

Clearly, none of claims 1-3 are anticipated, as each and every limitation in each claim is not found in the reference. On the basis of the foregoing, Applicant respectfully submits that claims 1-3 are patentable over *Friedell et al*.

*Claim Rejections - 35 U.S.C. § 103*

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ng et al* (5,473,363) in view of *Kannes* (5,382,972). The Examiner looks to the *Ng* reference for a teaching of the general structure of the claimed system but admits that it differs from the claimed invention by not teaching the multimedia central office configured to combine captured video image of at least three users into a mosaic image. The Examiner looks to *Kannes* for such teaching. This rejection is traversed.

Ng

The *Ng et al* reference has been recognized by the Examiner as having significant deficiencies in its teachings. The Examiner admits that *Ng* only teaches a "backbone structure" involving a plurality of MCUs. However, the Examiner must further admit that the connection is in a daisy chain, with a MCU connectable to a maximum of two other MCU's in the chain. The Examiner must also admit that *Ng* only teaches the achievement of a decentralized MCU system. Finally, the Examiner does admits that *Ng* does not combine video images into a mosaic image for reproduction.

The presence of at least these four clear deficiencies in *Ng* requires the Examiner to look to *Kannes* for a supplemental disclosure.

Kannes

The courtroom system of *Kannes* suffers from the same deficiency as *Friedell*. *Kannes* is focused on a local and centrally controlled distribution network. The system is controlled by a centrally located operator 6 (fig 2). There is no teaching of how a decentralized system would be combined with a centralized system; in fact, these are opposed teachings. This is a classic reason for unobviousness: incompatibility and teaching away.

Contrary to the Examiner's statement in the Advisory Action, there are many reasons given in the prosecution history that distinguish the claims from the two references, not just long distance communication. Indeed, now, the claims recite an adaptability for communication via a public digital network.

Again, the Examiner has not explained how or why one would consider combining *Kannes* with the *Ng* system. What would it look like and how would it be implemented? The Examiner states such combination would "reduce tremendous equipments costs." This is not sensible as *Kannes* is a courtroom system, with a coverage limited to a few adjacent rooms at most. Why would *Kannes* expand to a more complex network system as contemplated by *Ng*? Alternatively, why would the more complex system of *Ng* look to be limited by the simple system of *Kannes*, as such modification would severely restrict its capability.

One of ordinary skill would clearly conclude from the illustrations of the systems in the Figures of the respective references, particularly *Kannes'* Figures 5, 7 and 9 on one hand, which relate to centrally controlled communications between rooms and the cover page of *Ng* on the other, that they are incompatible and have a completely different focus. Finally, as previously explained, even if combined, the system does not meet all of the express limitations outlined above.

Nowhere in the combination is there a switching through a multimedia central office, as that term would be understood to relate to non-local switching. Nowhere in the combination is there digital switching information transmitted with the audio and video signals from one network to another and transceived through a multimedia central office. Nowhere in the combination is there a teaching or suggestion of an arrangement with the capability to be applied to a public digital network, specifically a system where a network having a plurality of workstations may be connected through a multimedia central office to at least one other workstation with video, audio and data being connected to the central office.

On the basis of the foregoing, the Examiner is respectfully requested to acknowledge the deficiencies in the teachings of the two references and to withdraw rejection of claims 1-3 on the basis of *Ng* and *Kannes*.

#### *New Claims*

Applicant has added new dependent claims 17-52 in order to further define the subject matter that presently is set forth in original claims 1-3. All of these claims depend directly or

indirectly from allowable claim 1, whose distinguishing features have been advocated previously. All of these claim are supported by the original disclosure, as evidenced by the following chart, provided for the Examiner's convenience.

Claim #	Subject Matter	Support In Specification		
		Page #	Line #	Figure #
17	MM mail capabilities	10 13 52	28 9 all	
18	mixture of user access protocols	7 11 42	25-30 27-36 35	3
19	UTP carries Ethernet protocol	9 10 14 40	34-35 8-10 17-27 35	
20	mixture of user video compression protocols	42 43	35 12-13	
21-25	plurality of multimedia central offices in multiple locations connected by public digital network	19 thru 23		6-8, 11, 12, 14
23-25	choice from those available is automatically made	19 thru 23		13, 14, 24
26	conference bridge creates mosaic using pixel domain methods	24 25	17-19 7-12, 21-26	15
27	Conference bridge creates mosaic using variable-length codeword domain methods	26 thru 27	Start line 24	15
28	conference bridge creates mosaic using DCT domain methods	26 thru 27	Start line 7	15
29	other workstations connected by wireless links	29	20 and 31	
30	distributed conference bridge	24 thru 25 27 thru 28 42	Start line 31 Start line 29 7-27	24, 25, 26
31	video closeups	42 44	31 22-24	25, 26
32, 33	Conference bridge server with assignable input, output, and compositing cells	43 thru 47		25, 26
34	Data sharing	47 48 thru 49	27-29	27
35	application sharing	47 49 thru 50	27-29 Start line 21	27
36	conference recording	50 51 thru 52	26-30 Start line 7	3-5
38, 39	Usage monitoring for billing system	50 thru 51	Start line 31	
37	synched AV + graphics in captured/replayed stored conference recording and MMmail	52	23-35	3-5
40	directory services	47 thru 50 54	32-34	3-5
41	with home interactive TV as endpoint	53 thru 54	Start line 16	3-5
42	With video on demand	53 thru 54	Start line 23	3-5

			19-28	3-5
43	with data visualization as a source	54	21-23	3-5
44	with data sonification as a source	54	5-10	3-5
45	with information filters to select clips for customized "video newspaper"	55		
46	with videogames	54 55	10-11 16-21	
47	Shared codec banks	10 11	26-28 5-6; 14-18	3
48, 49	Evolvable services via service primitives	55-56	Start line 22	3-5
50-52	Interfacing w/ 3 <sup>rd</sup> party service providers	18 53	21-26 9-15, 23-31	

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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APPENDIX  
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

Claim 1 (Amended) A system for providing video communication services to one or more premises, at least one premise including a plurality of video communications-services users, the system comprising:

(a) a first premises network;

(b) a plurality of user workstations [(i)] interconnected by the first premises network, [and] each of said plurality of user workstations having [including (ii)] one of at least video and audio capture and reproduction capabilities, [and/or] video sink and display capabilities and both at least video and audio capture and reproduction capabilities and video sink and display capabilities; and

(c) a multimedia central office [(i)] being in communication with the first premise network and being adapted for coupling to a public digital network, [(ii)] the multimedia central office, in use, transceiving audio, video and digital data signals for providing at least switching functions [1.] originating at or destined for at least one user workstation, [(iii)] to and from the first premises network to provide video communications services, [(iv)]

the multimedia central office further being [1.] coupled to at least one other workstation, not associated with the first premises network, and [2.]

the multimedia central office being configured to combine captured video images, of at least three users, into a mosaic image for reproduction at a workstation of at least one user.

New Claims 17-52 have been added.